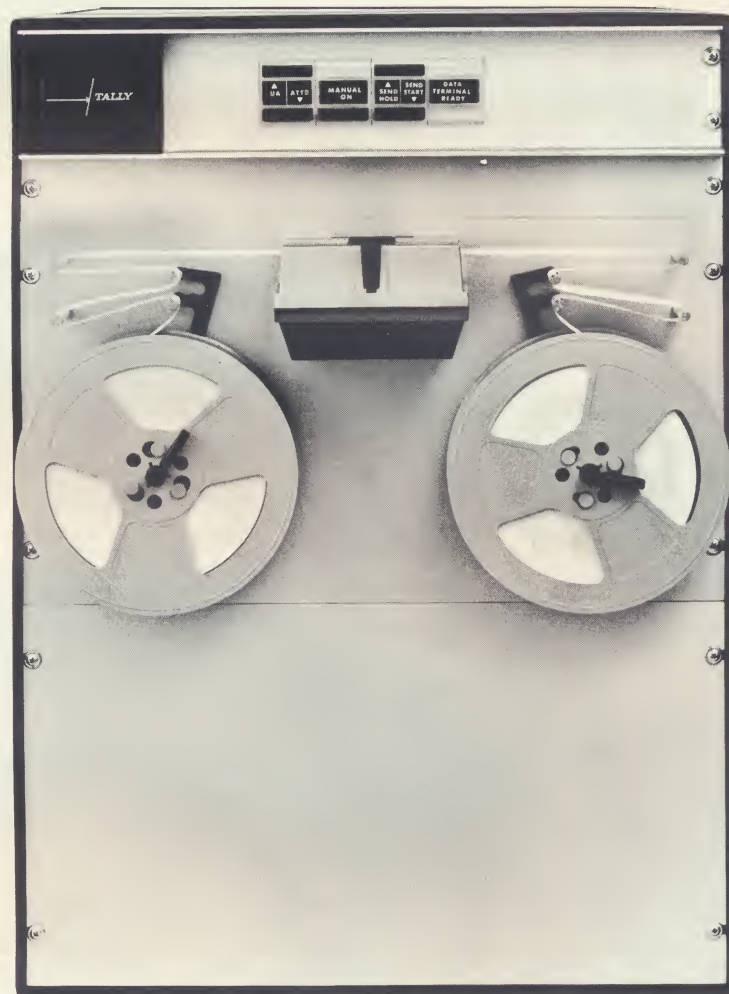The Tally System 101 is ideal where both economy and high speed are desirable for transmission of paper tape data. Capable of unattended operation, the System 101 offers easy installation, simple operation, and high reliability while transmitting data at speeds of 1200 words per minute over ordinary telephone lines.


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BUSINESS COMMUNICATIONS SYSTEM 101 TRANSMITTER
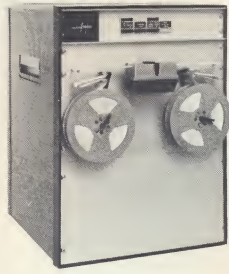
Simple Operation

Merely load the tape, place your call, and press the "data" button — that's all. Incoming calls to the system may be handled either manually or automatically. In "automatic" mode, the 101 answers the incoming call, verifies that a "legitimate" receiver is calling, transmits the data, then turns itself off and hangs up the call— completely unattended.
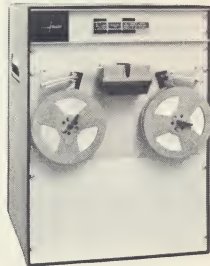
Easy Installation

Installation consists of merely plugging in the system.

Specifications — System 101

Speed — 1200 words per minute (120 characters per second).

Code Requirements — None; any code structure, odd, even, or no parity may be used.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.
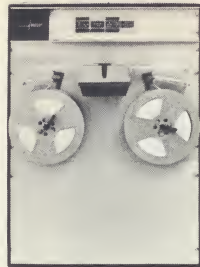
Tape Handling — Supply and take-up for up to 750 feet of tape on 7½ inch plastic reels. Supply reel unwinds counter-clockwise, take-up winds counter-clockwise. Tape feeds through the reader from right to left, as one faces the system, with the narrow three-hole edge of the tape out.

Power Requirements — 115 volt AC $\pm$ 10 volt, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions — 20 inches wide, 24 inches high, and 22 inches deep. Weight approximately 155 pounds.

Data Set Required — Bell System 202C-2 or equivalent.
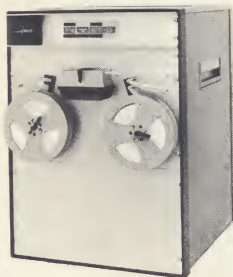
Compatible Systems — System 101 will transmit to Systems 201, 211, 301, and 311.

Options

1. 600/1200 Baud mode switch (for international transmission).
2. Installation in stand-up cabinet.
3. Operation on 230 volt, 50 cycle power.

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PHONE 206/624-0760, TWX 910-444-2039, CABLE ADDRESS TALLY SEATTLE WASHINGTON

The Tally System 102 transmitter is a compact, low cost desk top unit for transmitting five or eight level perforated tape data at 600 words per minute over ordinary phone lines. It is extremely quiet and reliable, simple to install and can be operated either manually or automatically (unattended).
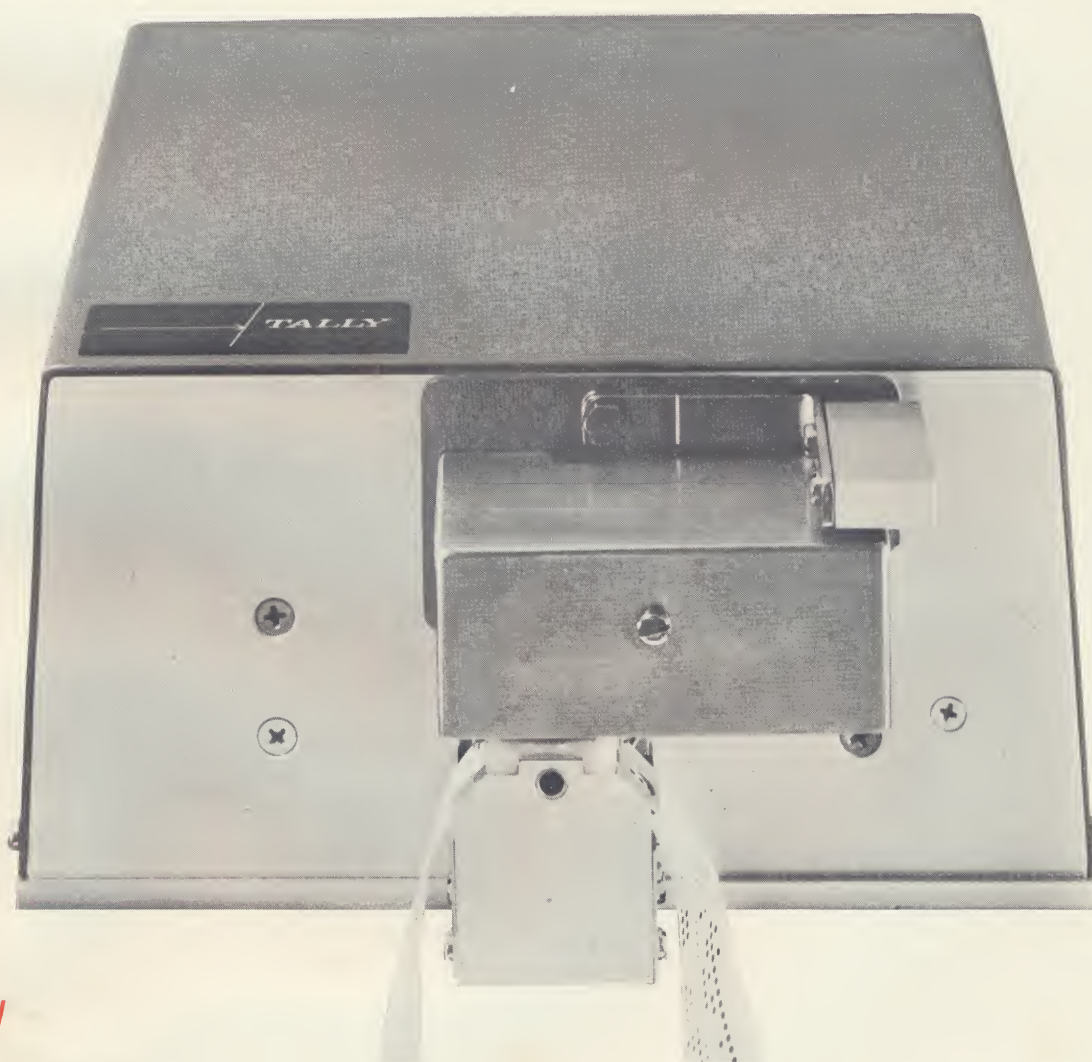
TALLY®

BUSINESS COMMUNICATIONS SYSTEM 102 TRANSMITTER

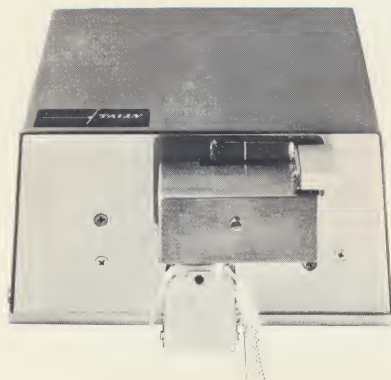Manual or fully automatic operation is a feature of the Tally System 102 transmitter. In the automatic mode it will answer an incoming call, verify that an authorized receiver is requesting data, and transmit the tape. An end-of-tape switch is provided to shut off the transmitter and hang up the call when the end of the tape reaches the reader. Manual operation requires the operator to merely answer the incoming call and select "data." Separate tape handling units (Unwinder and Winder) may be used when required.

Specifications—System 102

Speed—600 words per minute (60 characters per second).

Code Requirements—Any code format may be transmitted. Both five and eight level tapes may be used interchangeably.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Power Requirements—115 volt AC ±10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—8¾ inches wide, 4¾ inches high, and 11¼ inches deep. Weight approximately 8 pounds.

Data Set Required—Bell System 402C or equivalent.

Options—230 volt, 50 cycle power.

Specifications Subject to Change Without Notice.

Combining a unique retransmit capability for error control with high transmission speeds (120 characters per second), the Tally System 111 provides the ultimate in fast, reliable data transmission. Simplicity of operation and installation, utmost reliability are additional features that make the System 111 truly today's best buy in its field.

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BUSINESS COMMUNICATIONS SYSTEM 111 TRANSMITTER

OPERATION

Incoming calls to the System 111 may be handled either manually or automatically. The System 111 may be selected to answer your call, verify that an authorized receiver is calling and transmit data completely without your attention. At the end of the automatic transmission, the Sy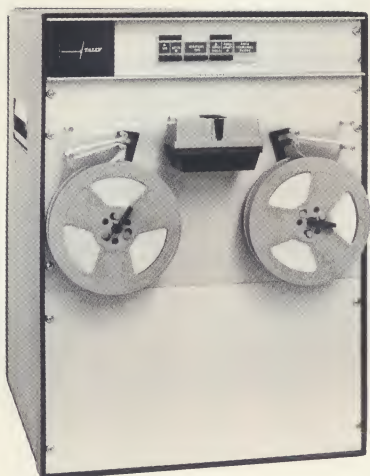stem 111 will turn itself off and hang up the call. It accommodates 750 foot rolls of tape on both the supply and take-up reels. A fast rewind of tape may be accomplished on the system.

Specifications—System 111

Speed—1200 words per minute (120 characters per second).

Code Requirements—Any code format may be used. For operation of the retransmit feature, either an odd parity or an even parity code must be used.

Block Character—Any customer-specified character. Typically, a "skip restore" or "print restore" function is used.

Flag Character—Any customer-specified character. Typically a "tape skip" or "non-print" function is used.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Supply and take-up for up to 750 feet of tape on 7½ inch plastic reels. Supply reel unwinds counterclockwise, take-up winds counterclockwise. Tape feeds through the reader from right to left, when facing the system, with the narrow three-hole edge of the tape out.

Power Requirements—115 volt AC± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—20 inches wide, 24 inches high, and 22 inches deep. Weight is approximately 155 pounds.

Data Set Required—Bell System 202C-2 or equivalent. On private lines, requires 202D-2 or equivalent.

Compatible Systems—201 and 301 without error control; 211 and 311 with error control.

OPTIONS:

1. Installation in stand-up floor console.
2. Overseas package including 230 volt, 50 cycle power and 600/1200 Baud speed selector.
3. Parity forming on five level tape.
4. Automatic block code generating.

Specifications Subject to Change Without Notice

ERROR CONTROL

Data transmitted from the System 111 is "blocked" by inserting a pre-specified "block" character at intervals of not less than 30 characters throughout the length of the tape. This "block" character may be any character you wish to specify. Blocks may, of course, be longer than 30 characters and they may vary in length from block to block within a tape.

The purpose of the block character is two-fold. First, it gives the transmitter a point to return to, should the receiver* detect an error, and thus void that block of data. Second, it serves as an index point to the end-use machine, identifying the limits of each block. The block character, entered in the tape by the source machine, might typically be a "skip restore" or "print restore" function.

The receiver* checks each character received for correct vertical parity **after it is punched** and, if in error, it will punch, in place of the next data character, a unique prespecified "flag" character. Since tapes are generally transmitted backward, that is, last block first and then printed out forward, the received tape will always have a "flag" character appearing **before** any block received in error.

Therefore, if a "skip" or "non-print" function were used for the "flag" and each block character is a "skip restore" or "print restore," the errored block of data will not be printed although it remains in the tape. This simple error skip feature could, of course, be a function of the computer input program if required.

*Compatible receiver systems are the Tally Systems 211 and 311.

The Tally System 128 Transmitter is the most advanced approach to easy to use, highly reliable, low cost data communications. Simple to install, the System 128 uses ordinary dial telephone networks to transmit data at 720 words per minute.

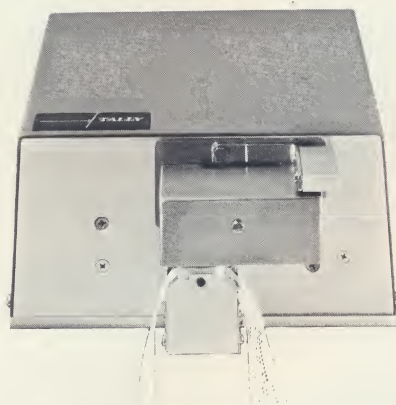Operation is easy. Data tapes can be loaded in the System 128 just as they come from the source machine. The last character to be punched is the first character to be transmitted. This eliminates the usual, time consuming rewind operation.

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BUSINESS COMMUNICATIONS SYSTEM 128 TRANSMITTER

Capable of transmitting data completely unattended, the System 128 can answer an incoming call, verify that an authorized receiver is requesting data, and transmit its tape automatically. When the end of the data tape is reached, the System 128 will hang up the call. Also, should the receiving station inadvertently run out of tape, the System 128 will back up to a maximum of 720 characters and hang up the call. This capability permits a central data processing facility to poll various data sending sites during non-working hours and have the data processed by the following morning.

Used in conjunction with the Tally System 228 Receiver, the System 128 provides unique and important error detection and correction features. When transmitting an error free tape with parity included, the System 128 will send data continuously at its maximum speed. If the receiver should detect an error, it will signal the System 128 to reverse its direction back to a "block character" and retransmit that portion of the tape. The receiver meanwhile punches a special "flag character" which will signal an errored block of data to the end use machine. Data can be blocked by any specified character. No maximum block length is imposed nor do all blocks have to be the same length.

Specifications—System 128

Speed—720 words per minute (72 characters per second).

Code Requirements—Any code format may be used. For operation of the retransmit feature, either an odd parity or an even parity code format must be used.

Block Character—Any customer specified character. Typically a "skip restore" or "print restore" function is used. Thirty characters minimum between block characters, 720 characters maximum.

Error Flag Character—Any customer specified character. Typically, a "tape skip" or "non-print" function is used.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Power Requirements—115 volt AC ± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—8¾ inches wide, 4¾ inches high, and 11¼ inches deep. Weight approximately eight pounds.

Data Set Required—Bell System 402C-2 or equivalent.

Compatible System—System 228

Specifications Subject to Change Without Notice

The Tally System 200 couples simplicity of operation with low price to provide unequalled economy in a desk top console receiver. It utilizes the highly dependable Tally perforator and accepts transmitted data at speeds of 600 words per minute over ordinary dial telephone lines. Source data is received in parallel format assuring consistant reliability and accuracy.
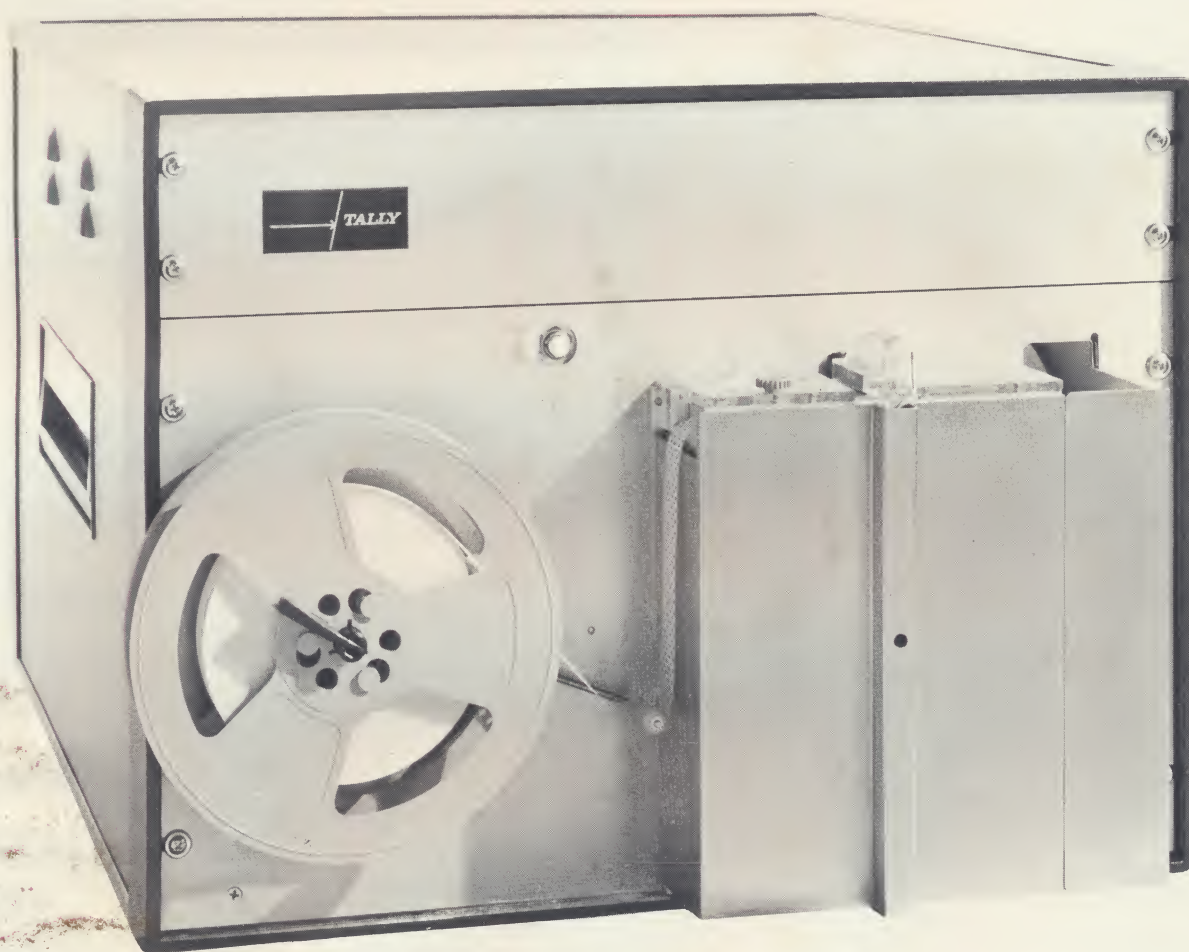
TALLY ®

BUSINESS COMMUNICATIONS SYSTEM 200 RECEIVER
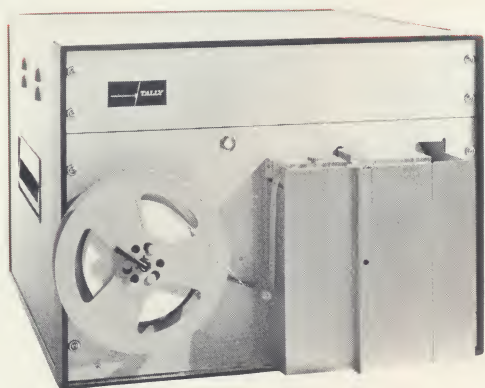
At the beginning of each transmission, the System 200 is turned on by receiving an "all space" signal from the transmitter. The all space signal is generated at the transmitter by sending a foot or so of blank (sprocket holes only) tape before the data. Once started, the System 200 continues to receive data at the full 600-word-per-minute rate without further operator attention. At the completion of the transmission the tape is "buzzed" out of the perforator with a single push button.

Specifications—System 200

Speed—600 words per minute (60 characters per second).

Code Requirements—None; any code structure, odd, even, or no parity may be used.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Supply and take-up reeling for up to 1,000 feet of tape. The received tape is wound counterclockwise, when facing the system, with the narrow three-hole edge of the tape out. Reloading takes less than 30 seconds.

Power Requirements—115 volt AC ± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—20 inches wide, 15 inches high, and 22 inches deep. Weight approximately 75 pounds.

Data Set—Bell System 402D or equivalent.

Compatible Systems—System 200 will receive from Systems 100 or 300.

Options—230 volt, 50 cycle power.

Specifications Subject to Change Without Notice

Perfect companion to Tally high speed Systems 101, 111, 301 and 311 transmitters, this compact desk top unit receives 120 characters per second (1200 words per minute).

Received data may be punched in either 5 or 8 level paper tape interchangeably; any code structure may be used. Either manual or completely automatic operation may be selected.
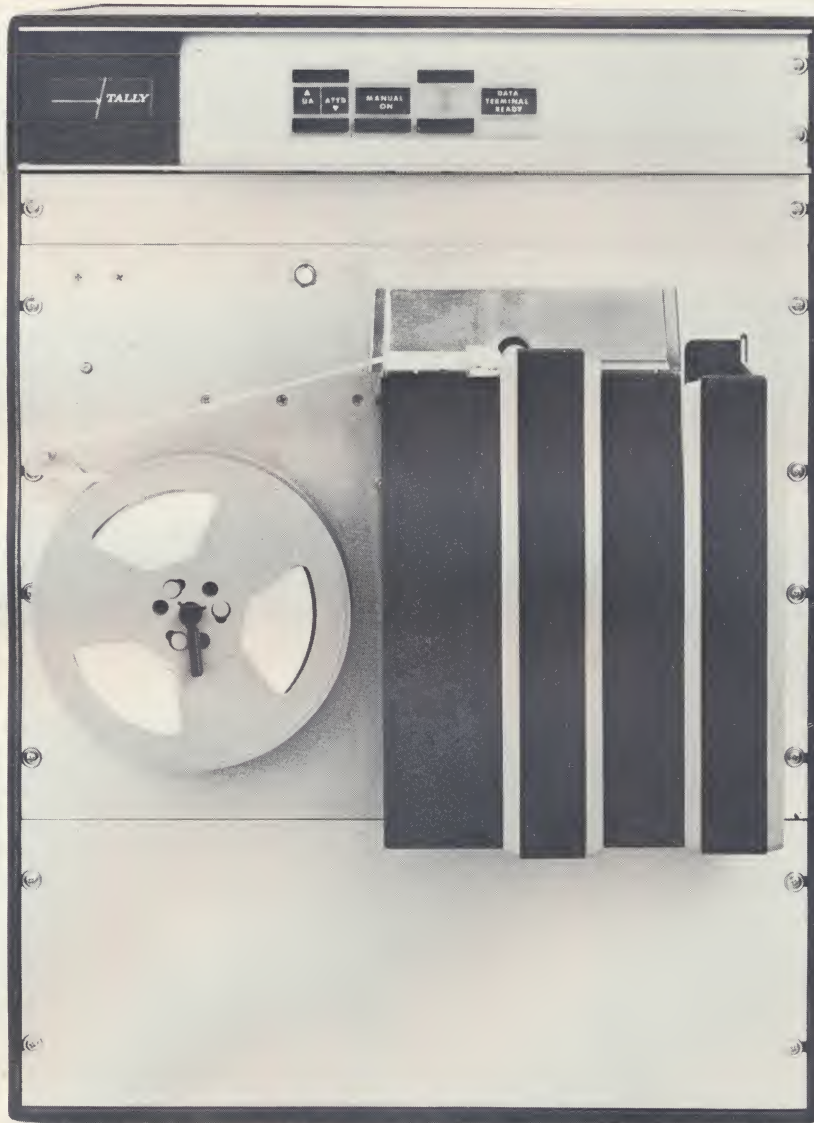
TALLY®

BUSINESS COMMUNICATIONS SYSTEM 201 RECEIVER
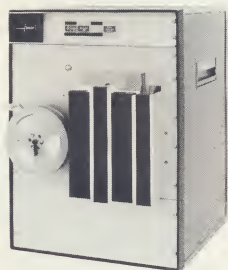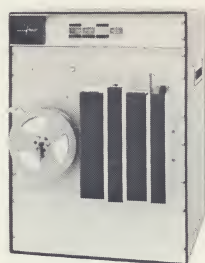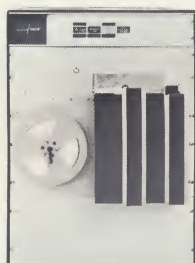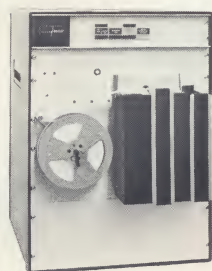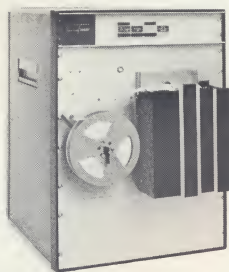
Incoming calls to the System 201 may be handled either manually or automatically. The system may be selected to answer your call, verify that an authorized transmitter is calling and receive data completely without your attention. At the end of automatic receiving, the System 201 will turn itself off and hang up the call.

The System 201 perforator tape supply is simple to reload, requiring less than 30 seconds for the complete operation.

Specifications—System 201

Speed—1200 words per minute (120 characters per second).

Code Requirements—None; any code structure, odd, even, or no parity may be used.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Supply and take-up reeling for up to 1,000 feet of tape. The received tape is wound counterclockwise, when facing the unit, with the narrow, three-hole edge of the tape out. Reloading takes less than 30 seconds.

Power Requirements—115 volt AC ±10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—20 inches wide, 27 inches high, and 22 inches deep. Weight approximately 150 pounds.

Data Set Required—Bell System 202C-2 or equivalent.

Compatible Systems—System 201 will receive from Systems 101, 111, 301 and 311.

OPTIONS:

1. Installation in stand-up floor console.
2. Ability to receive from any Tally 60-character-per-second "parallel" transmitter.
3. Features for foreign installation including 230 volt, 50 cycle power and 600/1200 Baud speed selection.
4. 3,000 foot tape supply. (Requires stand-up floor console.)

Specifications Subject to Change Without Notice.

The Tally System 211 Receiver combines high speed with a unique error control capability to offer the utmost in fast, error-free data gathering over ordinary telephone lines.

Easy "plug-in" installation, simple manual or automatic operation and high reliability are additional features that make the System 211 a favorite in business communications.

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BUSINESS COMMUNICATIONS SYSTEM 211 RECEIVER

OPERATION

Incoming calls to the System 211 may be handled either manually or automatically. In the automatic, or unattended mode of operation, the System 211 will answer your call, verify that an authorized transmitter is calling, and receive the data. At the end of the transmission, it hangs up the call and turns itself off.

If the perforator should deplete its supply of tape during a call, it will automatically hang up the call at that point. This action signals the transmitter to back up into the previous block of data and stop. In this manner the perforator tape supply can be replenished (reloading takes less than 30 seconds) and the call re-placed without loss of a single bit of data.

Specifications—System 211

Speed—1200 words per minute (120 characters per second).

Code Requirements—Any code format may be used. For operation of the error-detect feature, either an odd parity or an even parity code format must be used.

Block Character—Any customer specified character. Typically, a "skip restore" or "print restore" function is used. Thirty characters minimum between block characters.

Flag Character—Typically a "tape skip" or "non-print."

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Supply and take-up for 1,000 feet of tape. Take-up reel winds clockwise, when facing the panel, with the narrow three-hole edge of the tape out.

Power Requirements—115 volt AC ±10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—20 inches wide, 27 inches high, and 22 inches deep. Weight approximately 190 pounds.

Data Set Required—Bell System 202C-2 or equivalent. On private lines requires 202D-2 or equivalent.

Compatible Systems—101 and 301 without error control; 111 and 311 with error control.

OPTIONS:

1. Installation in stand-up floor console.
2. Ability to receive from any 60 or 75 character-per-second Tally transmitter.
3. Overseas package including 230 volt, 50 cycle power and 600/1200 Baud Speed Selector.
4. 3000 feet tape supply.
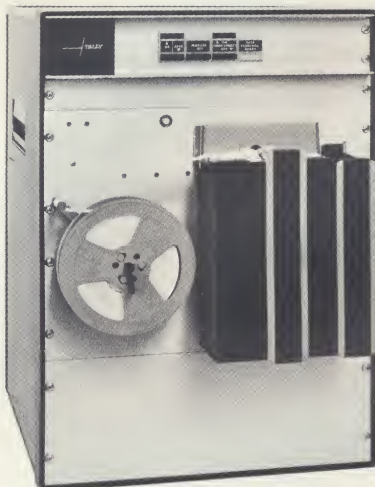
Specifications Subject to Change Without Notice

ERROR CONTROL

Data transmitted to the System 211 is "blocked" by inserting a pre-specified "block" character at intervals of not less than 30 characters throughout the length of the tape. This "block" character may be any character you wish to specify. Blocks may, of course, be longer than 30 characters, and they may vary in length from block to block within a tape.

The purpose of the block character is two-fold. First, it gives the transmitter* a point to return to should the System 211 detect an error and thus void that block of data. Second, it serves as an index point to the end-use machine, identifying the limits of each block. The block character, entered in the tape by the source machine, might typically be a "skip restore" or "print restore" function.

The System 211 checks each character it receives for correct vertical parity **after it is punched** and, if in error, it will punch, in place of the next data character, a unique pre-specified "flag" character. Since tapes are generally transmitted to the 211 backward, that is, last block first and then printed out forward, the received tape will always have a "flag" character appearing **before** any block received in error.

Therefore, if a "skip" or "non-print" function were used for the "flag" and each block character is a "skip restore" or "print restore", the errored block of data will not be printed although it remains in the tape. This simple error skip feature could, of course, be a function of the computer input program if required.

*Compatible transmitter systems are the Tally Systems 111 and 311.

The Tally System 220 features economy, simple operation, and reliability in a desk console receiver. An error detection option assures transmission and punch mechanism accuracy. Capable of either manual or automatic operation, the System 220 receives data at 600 words per minute over ordinary telephone lines.
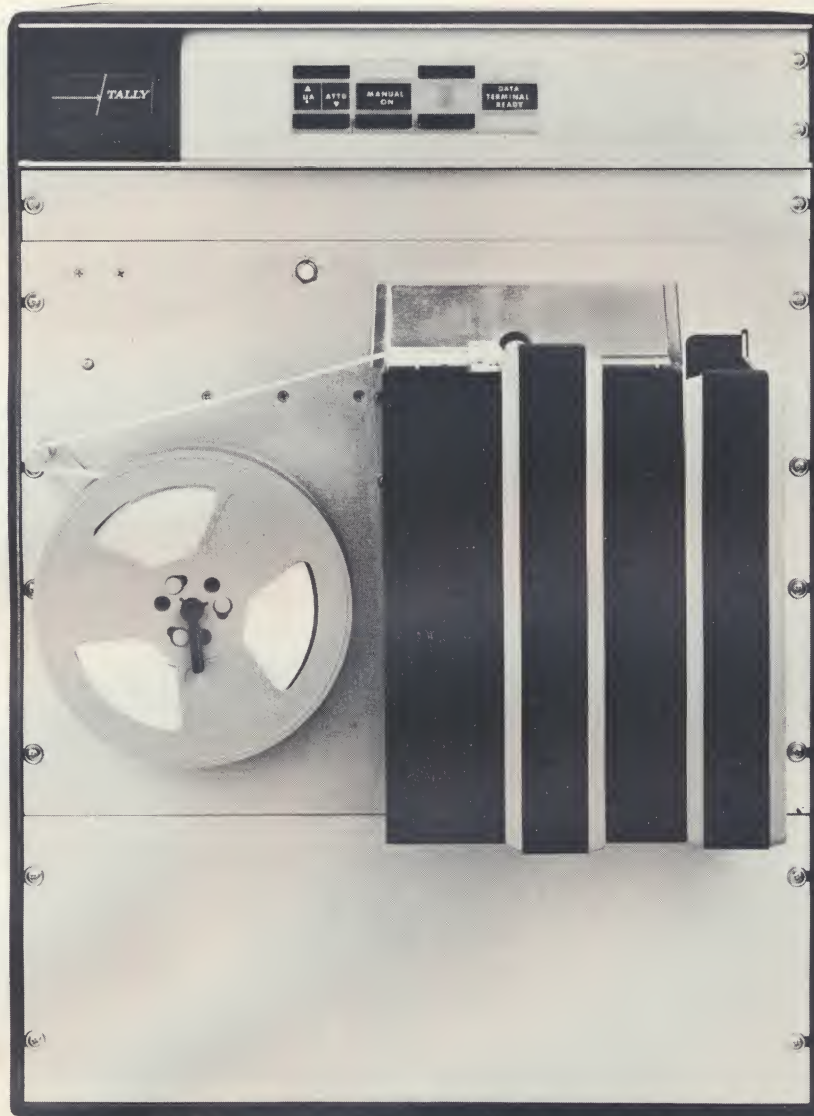
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BUSINESS COMMUNICATIONS SYSTEM 220 RECEIVER
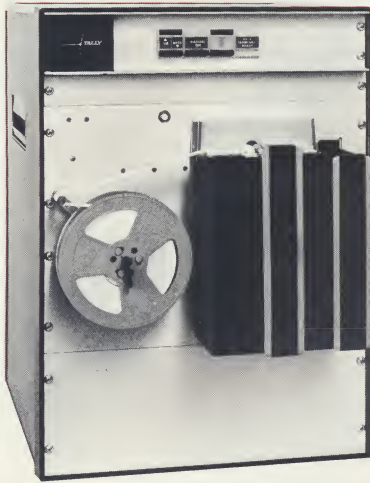
The System 220 may be selected to receive unattended or attended and will control both attended and unattended senders (Systems 100 and 102). At the beginning of each transmission the System 220 is turned on by receiving an "all space" signal from the transmitter (a foot or so of blank tape). An error detect option (a red signal light) allows the operator to verbally request retransmission when required. This provides error free transmission at substantially reduced cost over automatic retransmission systems.

Specifications — System 220

Speed — 600 words per minute (60 characters per second).

Code Requirements — None; any code structure, odd, even, or no parity may be used. For operation of the error detection option, either an odd parity or an even parity code format must be used.

Tape Requirements — Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling — Supply and take-up reeling for up to 1,000 feet of tape. The received tape is wound clockwise, as one faces the system, with the narrow three-hole edge of the tape out. Reloading takes less than 30 seconds.

Power Requirements — 115 volt AC $\pm$ 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions — 20 inches wide, 27 inches high, and 22 inches deep. Weight approximately 150 pounds.

Data Set Required — Bell System 402D or equivalent.

Compatible Systems — System 220 will receive from Systems 100 and 102 senders and the System 300 send/receive.

Options

1. Error detection panel indicator
2. Installation in stand-up floor console.
3. 3,000 foot tape supply (Requires stand-up floor console).

The Tally System 228 is the economical answer to reliable error-free data gathering at speeds of 600 words per minute over ordinary telephone lines. In addition to its ability to receive data completely unattended, the System 228 detects transmission errors and automatically instructs the sender to back up and retransmit.
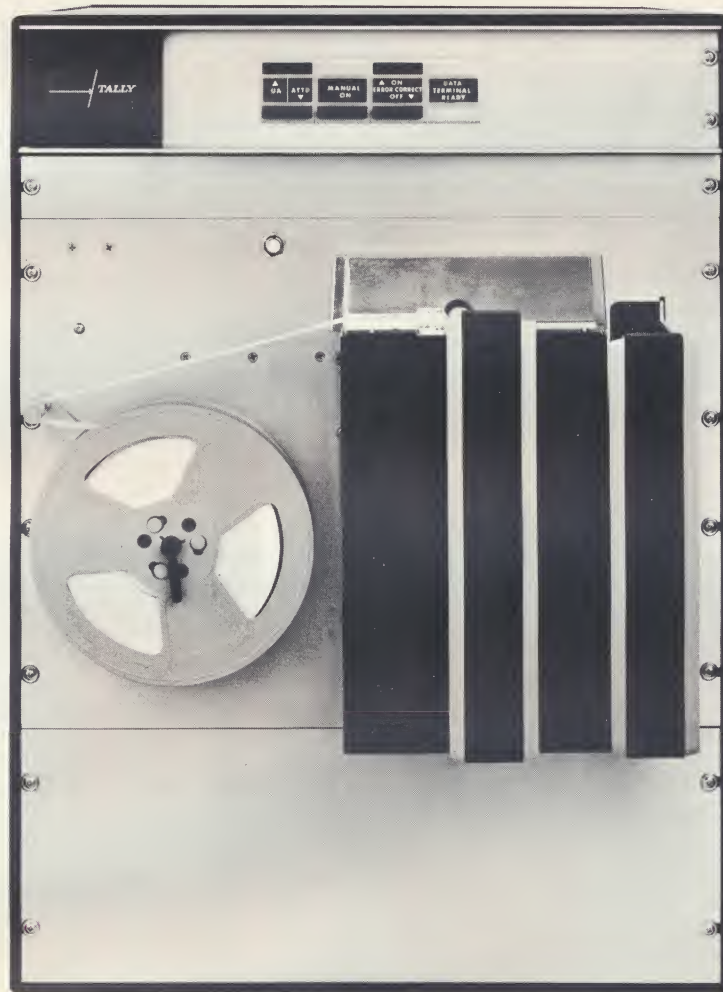
TALLY®

BUSINESS COMMUNICATIONS SYSTEM 228 RECEIVER
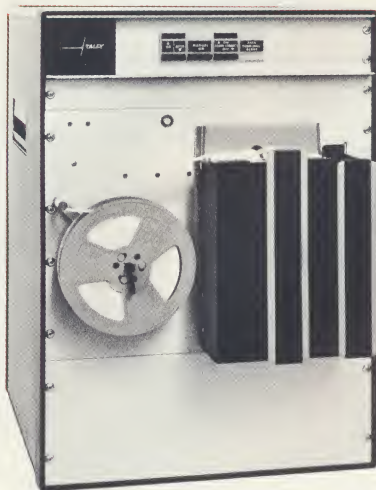
Error Control

Data transmitted to the System 228 is "blocked" by inserting a pre-specified "block" character at intervals of not less than 30 characters throughout the length of the tape to be transmitted. This "block" character may be any character you wish to specify. Blocks may, of course, be longer than 30 characters, and they may vary in length from block to block within a tape.

The purpose of the block character is two-fold. First, it gives the transmitter* a point to return to should the System 228 detect an error and thus void that block of data. Second, it serves as an index point to the end-use machine, identifying the limits of each block. The block character, entered in the tape by the source machine, might typically be a "skip restore" or "print restore" function.

The System 228 checks each character it receives for correct vertical parity **after it is punched** and, if in error, it will punch, in place of the next data character, a unique pre-specified "flag" character. Since tapes are generally transmitted to the 228 backward, that is, last block first and then printed out forward, the received tape will always have a "flag" character appearing **before** any block received in error.

Therefore, if a "skip" or "non-print" function were used for the "flag" and each block character is a "skip restore" or "print restore", the errored block of data will not be printed although it remains in the tape. This simple error skip feature could, of course, be a function of the computer input program if required.

*Compatible transmitter system is the Tally System 108.

Operation

Incoming calls to the System 228 may be handled either manually or automatically. In the automatic, or unattended mode of operation, the System 228 will answer your call, verify that an authorized transmitter is calling, and receive the data. At the end of the transmission, it hangs up the call and turns itself off.

If the perforator should deplete its supply of tape during a call, it will automatically hang up the call at that point.

Specifications—System 228

Speed—600 words per minute (60 characters per second).

Code Requirements—Any code format may be used. For operation of the error-detect feature, either an odd parity or an even parity code format must be used.

Block Character—Any customer specified character. Typically, a "skip restore" or "print restore" function is used. Thirty characters minimum between block characters.

Flag Character—Typically a "tape skip" or "non-print."

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Supply and take-up for 1,000 feet of tape. Take-up reel winds clockwise, when facing the panel, with the narrow three-hole edge of the tape out.

Power Requirements—115 volt AC ±10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—20 inches wide, 27 inches high, and 22 inches deep. Weight approximately 190 pounds.

Data Set Required—Bell System 402D-2 or equivalent.

Compatible Systems—100,102, and 300 without error control; System 108 with error control.

Options

1. Installation in stand-up floor console.
2. 3000 feet tape supply. (Requires stand-up floor console.)

Specifications Subject to Change Without Notice.

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FORM SDS 25 5/1/66 7500

The Tally System 301 is an economical data terminal for transmitting or receiving paper tape data at 1200 words per minute over ordinary phone lines. It offers the advantages of low cost, simple manual or fully automatic operation, complete system self-checking, and versatility—it may be used off-line for tape duplication when desired.
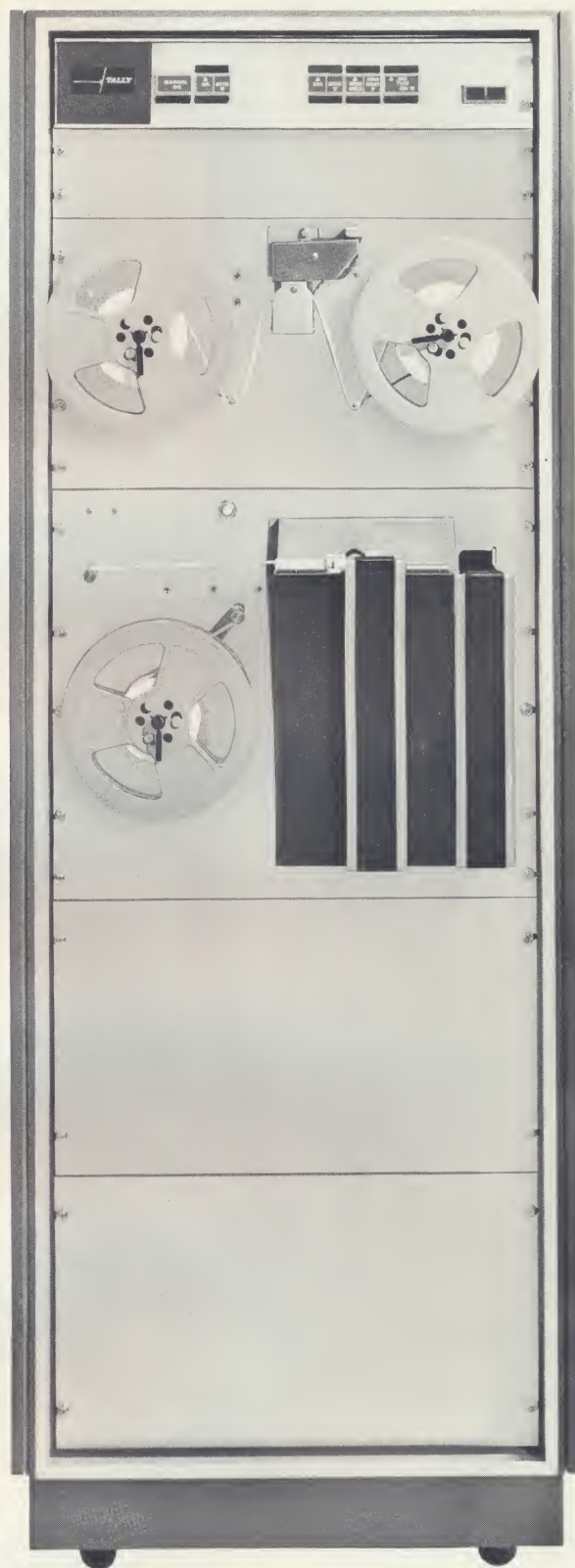
TALLY®

BUSINESS COMMUNICATIONS SYSTEM 301 SEND/RECEIVE TERMINAL
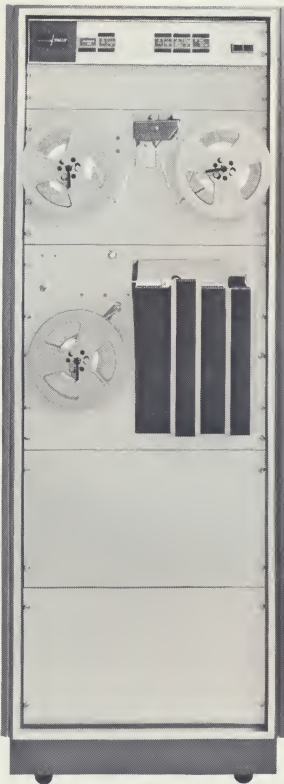
The System 301 terminal may be operated manually or automatically. In automatic operation, it will answer incoming calls, verify that an authorized receiver or transmitter is calling, and send or receive the data. On completion, it hangs up the call and turns itself off. This important feature permits the transmission of data during non-working hours so that it may be processed by the following morning.

Another important feature is the System 301's self-test capability. Completely off-line, it will send to itself and check the entire system for proper operation. In this mode it may also be used for tape duplication at its full 1200 word per minute rate.

Specifications — System 301

Speed—1200 words per minute (120 characters per second).

Code Requirements—Any code format may be used.

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Reader—Supply and take-up for up to 750 feet of tape on 7½ inch plastic reels. Supply reel unwinds counterclockwise, take-up winds counterclockwise. Tape feeds through the reader from right to left, when facing the system, with the narrow three-hole edge of the tape toward you.

Tape Handling—Perforator—Supply holds 1000 feet of tape. Take-up reel holds up to 750 feet and winds clockwise, when facing the system, with the narrow three-hole edge of the tape toward you.

Power Requirements—115 volt AC ± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—22 inches wide, 61 inches high, and 23 inches deep. Weight is approximately 370 pounds.

Data Set Required—Bell System 202C-2 or equivalent.

Compatible Systems—101, 111, 201, 211, 301, and 311, all without error control.

OPTIONS:

1. Capability of receiving from Tally 600 and 750 word per minute transmitters.
2. Overseas package including 230 volt, 50 cycle power and 600/1200 Baud Speed Selector.
3. 3000 foot perforator tape supply.

Specifications Subject to Change Without Notice.

The Tally System 311
Send/Receive Terminal is
the most versatile perforated
tape data station available.
It transmits or receives
data at speeds of 1200
words per minute over
ordinary dial telephone
lines, will operate completely
unattended, detects and
deletes errors, and can
be used for off-line
tape duplication and
editing in its spare time.
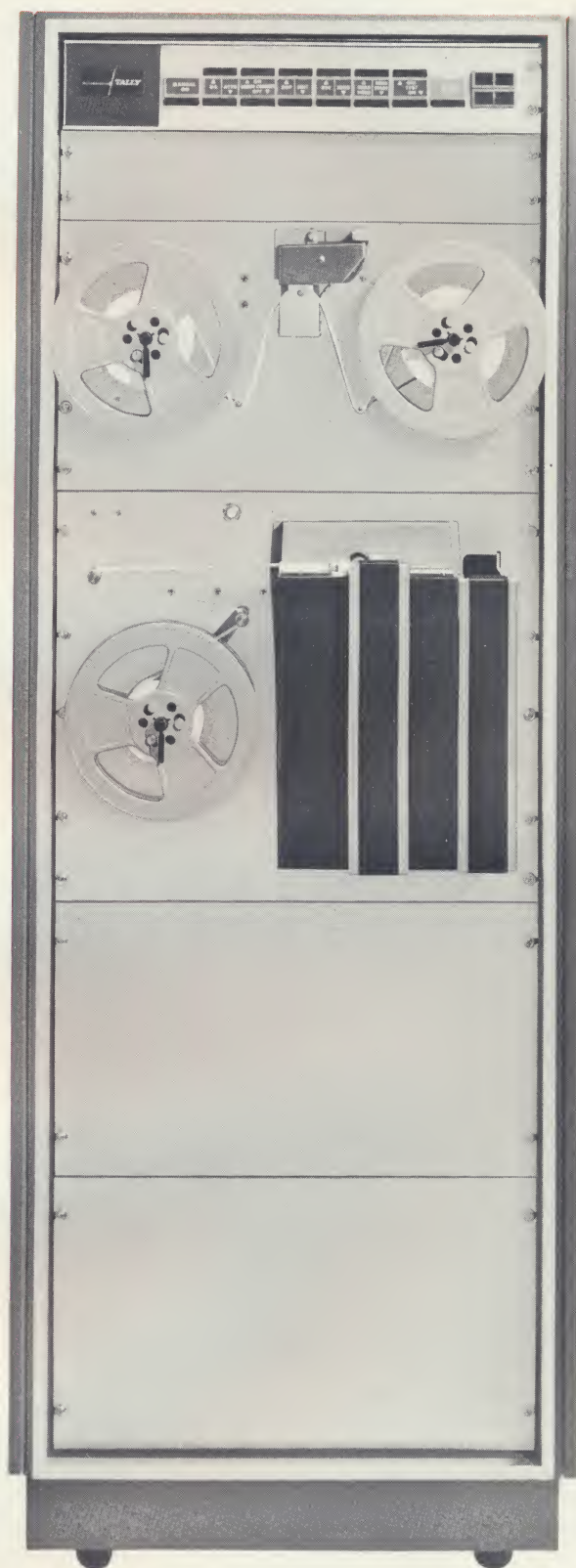
TALLY®

BUSINESS COMMUNICATIONS SYSTEM 311 SEND / RECEIVE TERMINAL
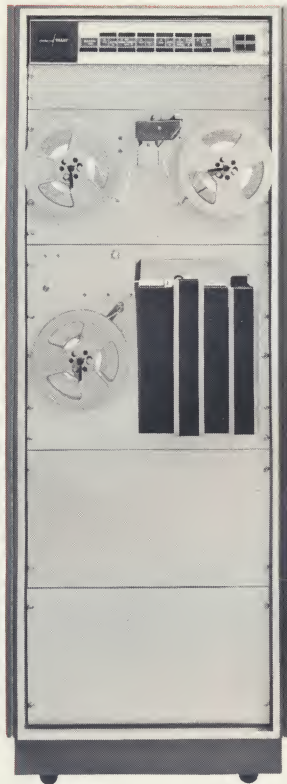
No operator need be present to send or receive data with the System 311. It answers incoming calls, verifies that an authorized transmitter or receiver is calling, and sends or receives the data. At completion, it hangs up the call and turns itself off. This capability permits a central data processing facility to handle communications during nonworking hours and have the data processed by the following morning.

When used in conjunction with System 111 transmitters, System 211 receivers, or with another System 311 terminal, the unique error detection and control capabilities are provided. When transmitting data tapes with parity included, the System 311 will stop only if the receiver signals an error. It then instantly reverses the data tape to a "block" character and retransmits that block of data. Conversely, while receiving, if the System 311 detects a punching error, it will insert a flag character in the tape and signal the transmitter to reverse and retransmit that portion of the tape.

The resultant "flagged" blocks of data may be removed from the tape during a subsequent off-line duplicate edit operation on the System 311. Alternately, the computer or printout machine may be programmed to skip between error flag and block characters.

Specifications—System 311

Speed—1200 words per minute (120 characters per second).

Code Requirements—Any code format may be used. For operation of the retransmit feature, either an odd parity or an even parity code format must be used.

Block Character—Any customer-specified character. Typically, a "skip restore" or "print restore" function is used. (Recognized as "Punch On".) Thirty characters minimum between block characters.

Flag Character—Any customer-specified character. Typically a "take skip" or "non print". (Recognized as "Punch Off".)

Tape Requirements—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Handling—Reader—Supply and takeup for up to 750 feet of tape on 7½-inch plastic reels. Supply reel unwinds counterclockwise, take-up winds counterclockwise. Tape feeds through the reader from right to left, when facing the system, with the narrow three-hole edge of the tape out.

Tape Handling—Perforator—Supply of 1,000 feet of tape, take-up for 750 feet. Take-up reel winds clockwise. Narrow, three-hole edge of the tape is out.

Power Requirements—115 volt AC ± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—22 inches wide, 61 inches high, and 23 inches deep. Weight approximately 370 pounds.

Data Set Required—Bell System 202C-2 or equivalent. On private lines, requires 202D-2 or equivalent.

Compatible Systems—101, 201, 301, without error control; 111, 211, 311 with error control.

OPTIONS:
1. Ability to receive from any 60 or 75 character-per-second Tally transmitter.
2. Overseas package including 230 volt, 50 cycle power and 600/1200 Baud Speed Selector.
3. Parity forming on five level tape.
4. Automatic block code generating.
5. 3000 foot perforator tape supply.

Specifications Subject to Change Without Notice.

The Tally System 600 is a tape conversion unit available in three basic configurations: Paper tape to magnetic tape, magnetic tape to paper tape, or bidirectional conversion, at speeds up to 120 characters per second. Optional code translation, parity checking, special formating and character insertion and tape duplication features are available to make this a versatile and indispensable auxiliary unit for data processing centers where both paper and magnetic tapes are handled.
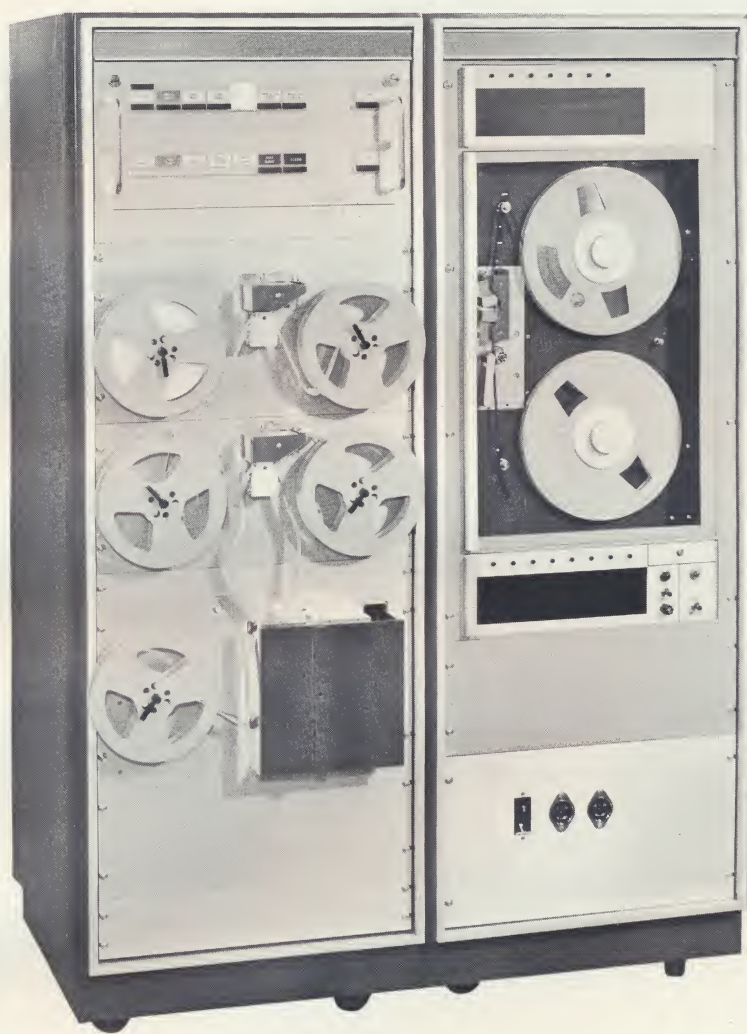
TALLY

SYSTEM 600 MAGNETIC TAPE / PAPER TAPE CONVERTER
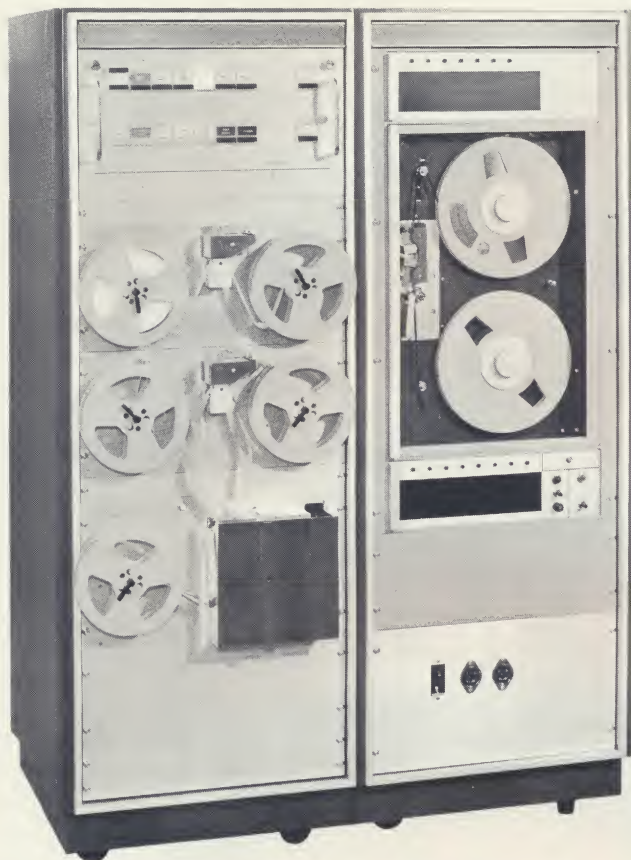
In any three of the basic configurations, the System 600 converter is available with these options:

Code conversion between 5 level Baudot coding and magnetic tape.

Code conversion between any paper tape code and magnetic tape.

Parity checking of the paper tape and/or magnetic tape.

Adjustable record length control.

Selective recording of data on magnetic or paper tape.

Special formating and character insertion.

Plugboard routing of certain characters for special handling.

Paper tape to paper tape duplication, with or without code translation.

Special requirements will be handled on request.

Specifications — System 600

Speed—Up to 120 characters per second.

Tape Requirements—Paper—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Requirements—Magnetic—Standard ½ inch tape on 2400 foot NARTB reels.

Tape Handling—Paper Tape Reader—Supply and take-up for up to 750 feet of tape on 7½-inch plastic reels. Supply reel unwinds counterclockwise, take-up winds counterclockwise. Tape feeds through the reader from right to left, when facing the system, with the narrow three-hole edge of the tape toward you.

Tape Handling—Perforator—Supply holds 1000 feet of tape. Take-up reel holds up to 1000 feet and winds clockwise, when facing the panel, with the narrow three-hole edge of the tape toward you.

Tape Handling—Magnetic Transport—10½ inch NARTB reels holding 2400 feet of magnetic tape. Rewind time is less than three minutes.

Power Requirements—115 volt AC ± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—System is generally installed in one or more cabinets measuring 22 inches wide, 61 inches high, and 23 inches deep.

Compatible Systems—System 600 will accept tapes from any Tally communication system and nearly all types of tape preparation devices. Magnetic tapes are compatible with most standard computers.

Specifications Subject to Change Without Notice.

The Tally System 700 is a highly versatile data center for bidirectional conversion of data between paper and magnetic tape and data transmitting or receiving on either paper or magnetic tape. It handles data at the rate of 60 to 120 characters per second, and is available with a wide range of optional features.

TALLY®

SYSTEM 700 MAGNETIC TAPE / PAPER TAPE DATA CENTER

Error detection and retransmission during communications.

Parity check of the paper tape and/or magnetic tape.

Adjustable record length control.

Selective recording of data on magnetic or paper tape.

Special formating and character insertion.

Plugboard routing of certain characters for special handling.

Paper tape to paper tape duplication, with or without code translation.

Special requirements will be handled on request.

Specifications — System 700

Speed—Up to 120 characters per second.

Tape Requirements—Paper—Five or eight level tape meeting proposed ASA specifications for paper tape. Tape may be paper, paper-Mylar sandwich, or aluminum-Mylar sandwich of any color or opacity.

Tape Requirements—Magnetic—Standard ½ inch tape on 2400 foot NARTB reels.

Tape Handling—Paper Tape Reader—Supply and take-up for up to 750 feet of tape on 7½ inch plastic reels. Supply reel unwinds counterclockwise, take-up winds counterclockwise. Tape feeds through the reader from right to left, when facing the system, with the narrow three-hole edge of the tape toward you.

Tape Handling—Perforator—Supply holds 1000 feet of tape. Take-up reel holds 750 feet and winds clockwise, when facing the panel, with the narrow three-hole edge of the tape toward you.

Tape Handling—Magnetic Transport—10½ inch NARTB reels holding 2400 feet of magnetic tape. Rewind time is less than three minutes.

Power Requirements—115 volt AC ± 10 volts, 60 cycle. Requires a separate three-wire grounded receptacle.

Dimensions—System is generally installed in one or more cabinets measuring 22 inches wide, 61 inches high, and 23 inches deep.

Data Set Required—Bell System 402C-2, or 402D-2, or 202C-2, or equivalent.

Compatible Systems—System 700 will receive tape from any Tally data transmitter. Additionally, tapes prepared on most paper tape preparation devices are acceptable to the System 700. Magnetic tapes are compatible with most standard computers.
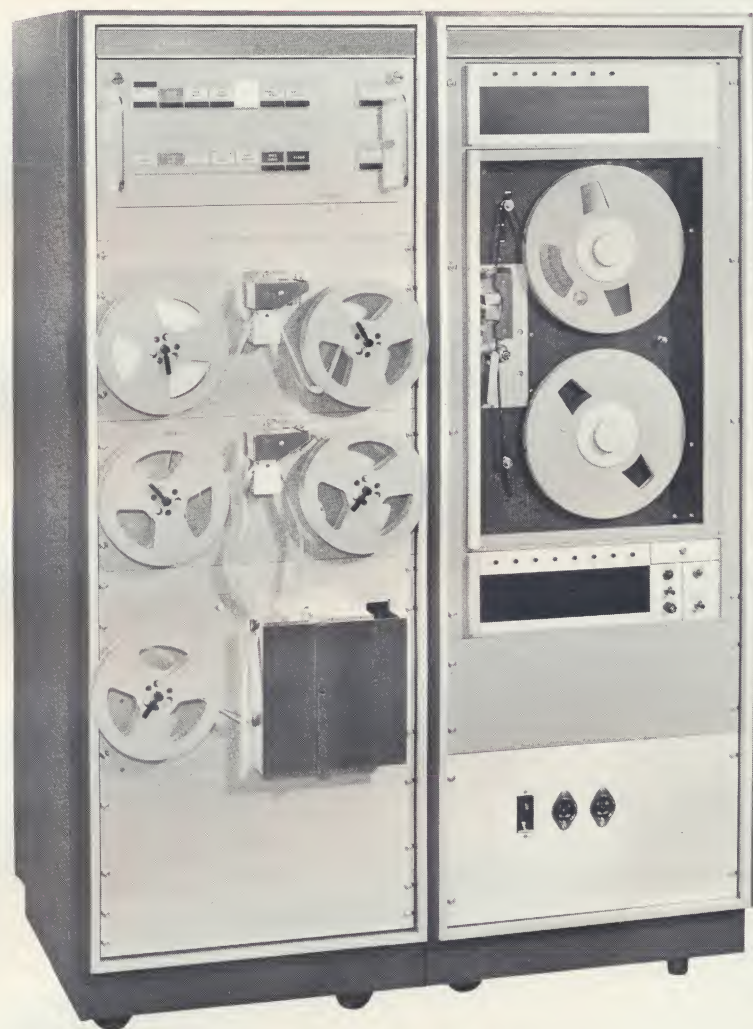
Specifications Subject to Change Without Notice.

Six basic configurations are available: (1) Receive data on magnetic tape, (2) send data on magnetic tape, (3) send and receive data on magnetic tape, (4) receive data on magnetic tape and/or convert paper tape to magnetic tape, (5) send data from magnetic tape and/or convert magnetic tape to paper tape, (6) send or receive data on magnetic tape and/or convert paper and magnetic tapes interchangeably.

Many options are available, including:

Code conversion between 5 level Baudot coding and magnetic tape. (While sending or receiving if desired.)

Code conversion between any paper tape code and magnetic tape. (While sending or receiving if desired.)

TALLY

The Tally system is easy to use and simple to install. Merely plug the system into a corresponding data set. The data set enables the Tally system to "talk" over ordinary dial telephone lines by converting electrical pulses into audible tones. The Tally compatibility chart indicates the required data set for each Tally system; also, it shows the usual combinations between Tally transmitters and receivers.

PARALLEL SYSTEMS (600/720 WORDS PER MINUTE)

System		200 Receive (600 WPM)	220 Receive (Up to 720 WPM)	228 Receive (Up to 720 WPM)	300 Send/ Receive (600 WPM)
	Data Set	402D	402D	402D-2	402C and 402D
100 Sender (600 WPM)	402A or 402C	Normal Configuration	Attended Transmission or Unattended Receiving	Without Error Correction Only	Normal Configuration
102 Sender (600 WPM)	402C		Normal Configuration	Without Error Correction Only	
128 Sender (720 WPM)	402C-2			Normal Configuration	
300 Send/ Receive (600 WPM)	402C and 402D	Normal Configuration	Attended Transmission or Unattended Receiving	Without Error Correction Only	Normal Configuration

SERIAL SYSTEMS (1200 WORDS PER MINUTE)

System		201 Receive	211 Receive	301 Send/ Receive	311 Send/ Receive
	Data Set	202C-2	202C-2	202C-2	202C-2
101 Sender	202C-2	Normal Configuration	Without Error Correction	Normal Configuration	Without Error Correction
111 Sender	202C-2	Without Error Correction	Normal Configuration	Without Error Correction	Normal Configuration
301 Send/ Receive	202C-2	Normal Configuration	Without Error Correction	Normal Configuration	Without Error Correction
311 Send/ Receive	202C-2	Without Error Correction	Normal Configuration	Without Error Correction	Normal Configuration

(See opposite side for other compatible serial data sets)

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BUSINESS COMMUNICATION SYSTEMS INFORMATION

Introduction

All Tally business systems operate in conjunction with a corresponding data set needed to convert electrical pulses into audible tones (and back again) for transmission over private or dial up telephone lines or the Western Union Broadband network.

Data sets (or modems) are supplied by the companies that provide private line circuits or data communication service through the public network. (Presently the most widely used data sets are those utilizing the Bell System Data Phone service.) Communications circuits are classified according to the frequency range (or bandwidth) employed. Generally the broader the bandwidth the higher the line cost. A voice grade circuit (bandwidth of 300 to 3000 cycles per second) is required for 60 to 120 character per second transmission of data in five to eight level paper tape.

The function of the data set at the transmit terminal is to accept electrical pulses from the tape reader on the Tally system and convert these pulses to audible tones. The tones are sent over phone lines much as voice tones in normal telephone conversation. The data set at the receive terminal converts the tones back to pulses which drive the perforator in the Tally receive system thus reproducing the original tape.

Serial vs. Parallel Transmission

In serial transmission each character transmitted is broken down into "bits" (or channels) and each bit is transmitted individually, one after the other.

In parallel transmission all eight data bits of a character are transmitted simultaneously.

Serial transmission has the advantage of higher possible speed (120 characters per second as opposed to the 75 character per second maximum with parallel transmission equipment). Additionally, serial communications systems are especially desirable when both send and receive functions are required at the same location. This is because a single serial data set can be used for both send and receive functions while the parallel systems require a separate data set for each function. Data set savings can be as much as 50 per cent for serial send/receive systems.

Parallel transmission offers lower cost terminal equipment plus a lower natural error rate. Parallel transmission systems are desirable for data gathering networks which require many locations transmitting to a central point. The low cost of the transmission system coupled with the low cost send only data set makes this true.

Parallel Data Sets Available

At present there are five models of the parallel Bell System Data Phone data sets available in the field which are compatible with Tally equipment.
402A Data Phone transmitter
402C Data Phone transmitter
402D Data Phone receiver
402C-2 Data Phone transmitter
402D-2 Data Phone receiver

Serial Data Sets (Modems)

All Tally serial data transmission systems are designed to operate with the Bell System 202C-2 Data Phone within the continental United States and Canada. The 202D-2, with an 804A-1 hand set, is used on private wires or on combinations of private lines and switched networks. Additional modems which are compatible with Tally serial business systems include:

GPO (BRITISH) MODEL 3 AND MODEL 4
(DATEL 600 SERVICE)
Only GPO modems are allowed to be used within the United Kingdom. This applies to serial modems on the switch network only.

WESTERN UNION DOMESTIC MODEM
For use with the Western Union Broadband network within the United States. These cannot be used for overseas data transmission and will not communicate with terminals on Bell System lines.

WESTERN UNION OVERSEAS MODEM (OR GH2002)
Used for overseas data transmission where point of origin is within the United States. Also these are the only modems used to communicate with other modems in foreign countries.

INTERNATIONAL TELEPHONE AND TELEGRAPH
MODEL GH2002
The ITT GH2002 modem is generally available in European countries for domestic or international communications.

DEUTCHES BUNDESPOST MODEM
The only modems permitted within Western Germany for both internal and overseas communications.

SPECIAL MODEMS
Special modems meeting CCITT specifications such as the RCA special modems are generally compatible with all Tally serial communications systems.
Each Tally serial system is completely compatible with other Tally serial systems. Any sender or send/receive system will communicate with any receiver or send/receive system.

General Information

To operate properly, both the data set and the Tally system should be plugged into a separate isolated and grounded AC power receptacle. Lines used for transmission should not be routed through switchboards or have extensions or pay telephones on them. Trunk hunting circuits must also be avoided.
The Tally sales representative is available to instruct the customer which data set should be installed plus any other related information.

Ordering Information

All system orders must indicate the data set to be used. Data sets are available in nearly all areas of the United States. Rates and delivery lead times may be obtained from a local telephone company. At the time of a system order, the local telephone company should be contacted to arrange installation of the proper data set. When necessary, the Business Systems Marketing Department at Tally may be able to assist in arranging data set installation.

TALLY

SYSTEMS PRICE LIST

Effective August 1, 1966

This supersedes all previous price lists

	Purchase Price	SERVICE RATE		MONTHLY LEASE RATE				
		Per Year	Per Month	24 Months	36 Months	40 Months	48 Months	65 Months
600 WORD PER MINUTE SYSTEMS								
TRANSMITTERS								
SYSTEM 100—Used with 402A or 402C data set	$ 600	$ 48.00	$ 4.00	$ 27.90	$ 19.68	$ 18.00	$ 15.48	$ 12.00
SYSTEM 102—Unattended operation. Used with 402C data set	720	57.60	4.80	33.48	23.62	21.60	18.58	14.40
RECEIVERS								
SYSTEM 200—Used with 402D data set. Includes tape reeling. Options include floor console, 3000' tape supply. (Option prices below)	1965	108.00	15.00	91.37	64.45	58.95	50.70	39.30
720 WORD PER MINUTE SYSTEMS								
TRANSMITTERS								
SYSTEM 128—Unattended operation and retransmit capability for error control. Used with 402C-2 data set .	960	76.80	6.40	44.64	31.49	28.80	24.77	19.20
RECEIVERS								
SYSTEM 220—Unattended receiving or controls unattended transmitter (System 102). Used with 402D data set. Includes tape reeling. Options include error detection, floor console, 3000' tape supply. (Option prices below)	2935	216.00	18.00	136.48	96.27	88.05	75.72	58.70
SYSTEM 228—Unattended receiving or control of unattended error correcting transmitter (System 128). Automatic error detection and retransmission control. Used with 402D-2 data set. Includes tape reeling. Options include floor console and 3000' tape supply. (Option prices below)	3880	228.00	19.00	180.42	127.26	116.40	100.10	77.60
SPECIAL SYSTEMS								
MAGNETIC TAPE/PAPER TAPE CONVERSION SYSTEMS								
SYSTEM 600—Built to customer specifications. Features available include paper to magnetic and magnetic to paper tape conversion; any code to any code translation; variable length to fixed length record conversion; tape duplication; parity checking; speeds to 120 characters per second . .	Basic Price 19,200	1920.00	160.00	892.80	629.76	576.00	495.36	384.00
SYSTEM 700—Same as System 600 with addition of data communications. Transmits from paper or magnetic tape. Receives on paper or magnetic tape. Speeds to 120 characters per second . . .	24,600	2460.00	205.00	1143.90	806.88	738.00	634.68	492.00
OPTIONS								
1. Error Detection	500	42.00	3.50	23.25	16.40	15.00	12.90	10.00
2. Free Standing Floor Console	150	N/C	N/C	6.98	4.92	4.50	3.87	3.00
3. 3000 Foot Perforator Tape Supply . . . . (Requires free-standing floor console.)	375	30.00	2.50	17.44	12.30	11.25	9.68	7.50

ACCESSORIES (Purchase only)

Standard Tally 7½" tape reel Part #519950 . . . . $ 3.00

Plastic reel adapter for mounting above reel on other equipment

(1) Part #229490 (Mounts on ¼" shaft) 5.00

(2) Part #341130 (Mounts on ⁵⁄₁₆" shaft) 6.25

Adapter Core—Increases inside diameter of tape wound on above reel to 3¼" for use on center feed unwinders 6.00

Manual tape punch for editing and splicing tape. #4042000 . . 50.00

PAPER TAPE

1" Wide, oiled, printed "Tally." **1000'**, 28 Rolls per case, #317460. **3000'**, 9 Rolls per case, #349360.

Quantity	1000'	3000'
Per roll	$ 1.50	$ 4.32
Per case, 1-5	33.00	30.60
Per case, 6-19 . . .	30.00	27.72
Per case, 20 or more .	27.00	25.38

TALLY

BUSINESS COMMUNICATION SYSTEMS PRICE LIST

1200 WORD PER MINUTE SYSTEMS

All Tally 1200 WPM systems operate with the Bell System 202C-2 data set or equivalent. When ordering the data set from your local telephone company, be sure to specify the following options: (1) Bit rate over 900; (2) EIA interface; (3) Permanent unattended answering; (4) Reverse channel.

	Purchase Price	SERVICE RATE		MONTHLY LEASE RATE				
		Per Year	Per Month	24 Months	36 Months	40 Months	48 Months	65 Months
TRANSMITTERS								
SYSTEM 101—Unattended operation. Includes tape reeling. Options include floor console; 600/1200 WPM speed selection. (Option prices below) . . .	$ 1540	$150.00	$ 12.50	$ 71.61	$ 50.51	$ 46.20	$ 39.73	$ 30.80
SYSTEM 111—Unattended operation and retransmit capability for error control. Includes tape reeling. Options include floor console; 600/1200 WPM speed selection; parity forming; block code forming. (Option prices below)	2040	180.00	15.00	94.86	66.91	61.20	52.63	40.80
RECEIVERS								
SYSTEM 201—Unattended operation. Includes tape reeling. Options include floor console; receive compatibility with systems 100, 102, 128; 600/1200 WPM speed selection; 3000' tape supply. (Option prices below)	4520	240.00	20.00	210.18	148.26	135.60	116.62	90.40
SYSTEM 211—Unattended operation. Detects errors and controls retransmission. Includes tape reeling. Options include floor console; receive compatibility with Systems 100, 102, 128; 600/1200 WPM speed selection; 3000' tape supply. (Option prices below)	5200	270.00	22.50	241.80	170.56	156.00	134.16	104.00
COMBINATION TRANSMIT/RECEIVE SYSTEMS								
SYSTEM 301—Unattended operation. Offline tape duplication. Includes complete tape reeling. Options include receive compatibility with Systems 100, 102, 128; 600/1200 WPM speed selection; 3000' tape supply; typewriter. (Option prices below) .	6520	300.00	25.00	303.18	213.86	195.60	168.22	130.40
SYSTEM 311—Unattended operation. Sender has retransmit capability for error control. Receiver detects errors and controls retransmission. Off line tape duplication and editing. Includes complete tape reeling. Options include receive compatibility with Systems 100, 102, 128; 600/1200 WPM speed selection; parity forming; block code forming; 3000' tape supply; typewriter; card reader. (Option prices below)	7190	336.00	28.00	334.34	235.83	215.70	185.50	143.80
OPTIONS								
1. Free Standing Floor Console	150	N/C	N/C	6.98	4.92	4.50	3.87	3.00
2. Receive Compatibility with Systems 100, 102, 128 . . .	75	12.00	1.00	3.49	2.46	2.25	1.94	1.50
3. 600/1200 WPM speed selection	150	24.00	2.00	6.98	4.92	4.50	3.87	3.00
4. Parity Forming	600	48.00	4.00	27.90	19.68	18.00	15.48	12.00
5. Block Code Forming	600	48.00	4.00	27.90	19.68	18.00	15.48	12.00
6. 3000 Foot Perforator Tape Supply . . . . (Available only in systems installed in free standing floor console)	375	30.00	2.50	17.44	12.30	11.25	9.68	7.50
7. Typewriter	2800	240.00	20.00	130.20	91.84	84.00	72.24	56.00
8. Card Reader	2800	240.00	20.00	130.20	91.84	84.00	72.24	56.00

INSTALLATION

All Tally Systems are installed at no charge to the customer, whether leased or purchased.

SERVICE

Nationwide service is provided by Tally. In addition, Tally maintains a data communications test center in Seattle for on line testing. This test service is available free of charge to all Tally Systems customers.

Service is provided through a service contract or on a per call basis.

TALLY

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